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## OUR ROUND CHURCHES.

WE still have four ancient Round Churches, and the ruins of a fifth. We have word of more in old writings. The medieval historians tell us Wilfred's Church in Hexham was round; and that Wearmouth Church was also of a circular plan. The four round churches we possess are in different parts of the kingdom—London, Cambridge, Northampton, and Little Maplestead in Essex. All the four are dedicated to the Holy Sepulchre; and consist of a circular building, from which a rectangular chancel departs eastwards. They are supposed to reproduce the distinctive outlines of the church built over the Holy Sepulchre in Jerusalem. There is also an impression in some minds that the first round churches were survivals of expression of the same ideas that prompted the placing of huge stones in circles for temples in the ancient times spoken of as Druidical.

All these four round churches have passed through the crucial process of restoration in our time. They have been scraped, polished, and shorn; and are supposed to be now restored to as much likeness to their original features as could be compassed. During the centuries that have passed since their erection, various alterations and additions were made; and they had, doubtless, all arrived at a dilapidated condition, which those in charge of them considered would be improved by the processes in question. Dr Johnson tells us our cathedrals were mouldering, in consequence of unregarded dilapidations, in his day, and remarks that it seemed to him to be part of the despicable philosophy of the times to despise our monuments of sacred magnificence; and we may take it for granted that the circumstances of our round churches were equally unhappy. Consequently, perhaps, we should not look too closely for mistakes; though it would not be quite fair to leave unmentioned the fact that there are many archaeologists who have expressed their discontent that every Elizabethan, Jacobean, and Queen Anne touch and tone, and

every evidence that the House of Hanover ever reigned, were displaced in the course of some of the renovations.

The finest of the four round churches is that in the metropolis, known as the Temple Church, formerly owned by the Templars, and the Knights-Hospitallers of St John, successively; and now enjoyed by the learned legal Societies of the Inner and Middle Temple. We enter the vast and superb 'round' of it through a wide low Norman doorway at the west end, the very same that the old martial Templars passed in and out at seven centuries ago, very richly sculptured, weather-blackened, and hoary; and now approached by a descent of several steps, rendered necessary by the accumulations that have heightened the surrounding ground. As the heavy doors slowly close, the visitor finds himself in a large lofty circular building, lighted by two tiers of narrow semicircular-headed windows, in the centre of which is a circular arcade, or peristyle, of six lofty clustered polished Purbeck marble columns, carrying pointed arches, which arcade leaves an ambulatory between the columns and the outer wall, and at the same time supports the upper part of the fabric, sometimes called the drum. On the tessellated floor, in the silence and solitude, lie the stone effigies of several knights. Above the ambulatory mentioned is a triforium, pierced at intervals with openings that command the interior of the rotunda. This is enriched with a ring of interlaced arches with semicircular headings, over the pointed arches of the stupendous colonnade, which marks the transitional period of the erection, a period when pointed architecture had not quite vanquished the old Norman manner of building. We may be sure the 'round' was built before the rectangular part of the edifice, because in the latter only the pointed arch is to be seen. Less, perhaps, than fifty years may have elapsed between the commencement of the rotunda and the completion of the eastern portion of the edifice; but in that time the new style had completely established itself.

There is a winding stair leading up to the triforium; and as though to help us to realise the rigour of the rules of the proud Templars, there is a small cell passed on the way up in the thickness of the north wall, too small for a man to stretch out his limbs in, and lighted only by two slits opening into the church, in which tradition says offenders were imprisoned, and performed penance. No reference to this cell can be made without mention of an unfortunate Grand Preceptor of Ireland who was placed in irons in it and left there to starve to death. In the wide and light triforium, or gallery, are now placed the interesting Elizabethan and Jacobean monuments removed from the walls in the restoration. Among them is one to the memory of James Howell, 'the worst of poets,' author of the *Epistolæ Howellianæ*, or Familiar Letters.

Next in interest to the Temple is the Cambridge round church. This stands in an open space on the east side of Bridge Street, in a part of the town once called the Jewry. It was built in the reign preceding that which saw the masons gradually raising up the Temple, in London; and is, consequently, of a more massive character. It is forty-one feet in diameter, and the circular colonnade within it has eight cylindrical pillars and semicircular-headed arches enriched with chevron ornament. The upper part of the tower supported by this circular range of columns is, like the chancel, the work of a later century. It was raised to a greater height than the Norman masons contemplated; but has now been reduced from its Plantagenet pretensions and covered with a conical roof.

The Northampton example has likewise seen vicissitudes. Both rotunda and chancel were originally of Norman workmanship; but all the Norman chancel was taken down in a succeeding century and rebuilt in the manner then in vogue; and all the upper part of the rotunda at a later period. Though this, too, was replaced, many other alterations and additions were made which affected the original plan, including the erection of a steeple west of the rotunda, and an apse eastwards of the chancel. Seeing that the wall that once surrounded the town and the castle that once protected it have both disappeared, and that a great fire (1675) destroyed a large portion of the town, it is a matter of congratulation that any portion of this nationally interesting fabric is still left to us.

The Essex example is smaller than either. It is built of flint with stone dressings. A porch has been added west of the rotunda; and, as at Northampton, an apse has been thrown out from the east end of the chancel. There are but six pillars in the ring to sustain the tower, and form the arcaded ambulatory round the building. The windows throughout are of a later date than the original Norman structure; and the roof over the ambulatory is broken at intervals by dormers. In each face of the low central tower, which is

hexagonal, is a small window opening; and its pyramidal roof is surmounted by a vane.

The ruins of the fifth round church are at Temple Bruerne, in Lincolnshire.

Curiously, Norman masons gave expression to the same continuity of idea by forming circular east ends to some of their other churches. These semicircles were in some instances as massive and solemn and austere as the round churches; and they had the same heavy solid cylindrical columns that seem so little removed from the huge monoliths of Druidical times, only arranged in a semicircle at the east end, instead of in a circle at the west end; and they admitted of an ambulatory, only it was round the east end instead of the west. The venerable church of St Bartholomew, in Smithfield, built by the minstrel of King Henry I., Rahere, is an example. The nave and transepts have been destroyed, and only the choir is standing; but this, in its vastness, solidity, and simplicity of aspect, and antique grace, is a most interesting relic; and at the east end of it is a set of cylindrical pillars looking as much like monoliths as the Norman masons could make them. In less stupendous buildings the semicircular east end became an apse only, without the rounded columns that give the grander fabrics so much majesty. The Priory Church on Holy Island had, originally, an apse to the choir, and others at the east ends of both the north and south aisles of it. As time went by, a large number of Norman buildings were enlarged by setting back the east ends, and thus elongating the chancels; hence it comes to pass that, as in this case, they have been removed to make room for these extensions, and only practised eyes can detect they ever existed. Occasionally, a semicircular apse may yet be seen in small ancient edifices that have not been altered. A striking example may be found at the foot of the Bewick Hills in North Northumberland in a small chapel there, that is very appealing in its reverential simplicity, in which the window-openings are but a finger-length in breadth.

Another phase of the use of the circle in our ecclesiastical fabrics is to be noted in the round towers of the churches in the eastern counties. There are about a hundred and seventy-five examples of them, and, with the exception of ten or a dozen, they all occur in Norfolk and Suffolk. Three of these exceptions may be seen in Cambridgeshire, two in Berkshire, two in Sussex, two in Essex, one in Northamptonshire, and one in Surrey. They have all every evidence of extreme antiquity, thick walls and very small window-openings, like loopholes, which, however, in some cases have been considerably enlarged in Plantagenet and Tudor times. The walls are generally four feet thick, and the only entrance is from the interior of the nave, an arrangement that must have made them veritably towers of strength. We can but remember that from the earliest times the buildings required for a community have always been associated with towers. From the days of the building of Babel to those of the last Parisian Exhibition, it has always been, 'Let us build cities and make towers.' Perhaps it is a matter of curiosity that so few of them have been circular; for not only early columns, but early arches, door-heads, and window-heads, were of a semicircular form. Be

that as it may, we learn as a fact that as centuries rolled by, the erection of ecclesiastical buildings in circles was discontinued throughout the land.

## DUMARESQ'S DAUGHTER.

### CHAPTER XXII.—THE BEGINNING OF THE END.

EARLY next morning, about three o'clock, as Linnell was dozing uneasily in his bed, on the second floor of an old Arab house not far from the Bourré Gate, a strange sound and tumult in the city awoke him suddenly. It wasn't the mere ordinary fusillade or boom of the batteries: he could sleep through that quite carelessly now. It was something out of the common. He rose, and opened the latticed window to explore the mystery. Looking out across the flat roofs, a fierce red glare met his eyes to eastward. Something up, undoubtedly! Heavy firing was going on along the Blue Nile line, in the dead of night, in the direction of Bourré.

At the very same moment, even as he looked and wondered, an answering red glare burst up like flame towards the sky on the west, along the White Nile front, in the direction of Messalamieh. Heavy firing was going on in that quarter too. A horrible din seemed to grow upon his ears as he stood and listened. It was plain the enemy had assaulted in force—and from two sides at once. The end had come at last! The Mahdi must be making his final attempt on Khartoum!

With a tremor of awe, Linnell rose hastily and put on his Arab dress as usual. Then he took his field-glass in his hand, and stepped out upon the flat white roof of the tumble-down villa. His quarters were in one of the highest houses in the whole town, from whose top terrace he could command the entire Messalamieh district. Gazing in that direction, he saw at once by the red glare of the fire and the white light of dawn, a number of swarthy clambering objects that swarmed and clustered over the rampart by the Messalamieh Gate. They looked like black ants, at such a dim distance, seen through the field-glass against the pale white wall of the fortifications; but Linnell knew in a second they were really naked black Soudanese soldiers, creeping one by one into the doomed city. They had filled up the ditch below with bundles of straw and palm-branch brushwood, and were escalading the wall prone on their bellies now, like so many cats or crawling insects!

At one glance he took it all in, that awful truth, in its full horror and ghastly significance. Those crouching black barbarians had almost carried the gate by this time, and in half an hour more the town would be glutted and given over to indiscriminate slaughter and rapine. Only those who have seen the black man at his worst can tell what nameless horrors that phrase encloses.

But before Linnell had time to make up his mind which way to go, or where duty most called him, another wild shout surged up simultaneously from the Bourré Gate, and another red glare burst fiercer and wilder than ever towards the pale expanse of tropical heaven.

The startled European turned his glass in the

direction of the new noise, but saw no naked black bodies scaling the walls over in that quarter. The cry and din towards Bourré came all, it seemed, from well *within* the gate. The mad red glare that burst up anew to the sky was in the city itself. Then Linnell knew at once what had happened on that side. Faragh Pasha had betrayed them! The game was up! His creatures had basely opened the eastern gate! The Mahdi's wild gang was already within the beleaguered city!

In that awful hour, every European heart in Khartoum was stirred by but one thought. To the Palace! To the Palace! To die defending Gordon!

With a throbbing bosom the painter hurried down the stairs of that crazy old native house and rushed out into the deserted streets of the city. The gray light of dawn and the red reflected glare of burning houses illuminated together the narrow tangled alleys. The minarets of the crumbling old mosque across the way stood out in pale pink against the lurid red background. But not a soul was to be seen in the deserted lane. Though the din and tumult rose fiercer and ever fiercer from the two main assaulted points, the silence in the empty houses on either side was almost death-like. For most of the Mussulman inhabitants had quitted the town three weeks earlier, by the Mahdi's permission, leaving few non-combatants within that doomed precinct; and the handful that remained were now cowering in their own gloomy little sunless bedchambers, waiting for the successful tide of negro savagery to burst in and massacre them like sheep in a slaughter-house.

Linnell girded up his burnous forthwith, and ran at all speed through the empty streets in the direction of the Palace. As he neared that central point of the entire city, crowds of natives, Egyptian officials, black Soudanese soldiers, and terrified Arabs, were all hurrying for safety towards the Governor's headquarters. It was a general *sauve qui peut*; all thought of their own skins, and few of organised resistance. Still, at the very moment when Linnell turned into the great square, a small body of Nubian troops was being drawn up in line, to make for the Bourré Gate, where the enemy was thickest. Sir Austen stood at their head and recognised his cousin. 'Well, it has come at last, Charlie,' he said, with a solemn nod. 'The black brutes are upon us in real earnest. This means massacre now, for my poor fellows are far too hungry, and too exhausted as well, to make anything like a decent resistance. We shall all be killed. Save yourself while you can. In that dress, nobody'd ever take you for a moment for a European. Slink back into the crowd, and when the Mahdi's people break upon you, give in your submission, and accept the prophet.'

'Never!' Linnell cried, placing himself in line by his cousin's side and pulling out his revolver. 'If we must sell our lives, we'll sell them dearly at any rate, in defence of Gordon.' And without another word, they made for the Bourré Gate in awful silence.

As they reached the actual scene of the fighting, or rather of the slaughter—for the worn-out defenders were too weary by far to strike a blow even for dear life—a horrible sight met the

Englishmen's eyes. No words could describe that ghastly field of carnage. It was an orgy of death, a wild savage carnagole of blood and murder. A perfect sea of naked black-skinned African fanatics had poured through the open gate into the battered town, and was rushing resistlessly now through all its tortuous lanes and alleys. With hideous cries and bloodstained hands they burst shrieking upon their defenceless enemies, who fled before them like sheep, or stood to be shot or sabred with oriental meekness. Every form of weapon was there, from savage club to civilised rifle, and all were wielded alike with deadly but reckless exultation of barbarism. Linnell had never in his life seen so awful a picture of slaughter and desolation. The fanatics as they swept forward, headed by their naked dervishes with blood-begrimed locks, shouted aloud in Arabic or in their own guttural Central African dialects, fierce prayers to Allah for aid, and savage imprecations of divine wrath on the accursed heads of the Mahdi's enemies. Neither man, woman, nor child was spared in that first fiery onslaught: whomever they met at close quarters they ran through with their bayonets or their long native spears: whomever they saw flying at a distance, they fired at with their rifles in wild confusion.

One fierce band of dervishes in red loin-cloths made straight along the street towards Sir Austen's little party. 'Kill, kill, kill!' the black fanatic at their head shouted aloud to his followers in his deep Arabic tones, stretching his bare arms heavenwards: 'Jehad! Jehad! The Prophet promises Paradise to all who die to-day in the cause of Islam. Slay, in the name of Allah and the Prophet; slay, in the name of the Mahdi, his servant!'

As he spoke, a bullet from Sir Austen's revolver whizzed hissing across the intervening space, and passed like lightning clean through his naked body. The red blood spurted out in a gush from the open wound; but the man pressed on regardless of the shot for all that. By some strange chance, the bullet had missed any vital part; and the dervish, clapping his open hand to the spot for a moment, and then holding up his palm, dripping red with his own blood, before his frenzied followers, cried out once more, in still wilder accents: 'Kill, kill, kill! and inherit heaven. See, the blood of the faithful is your standard to-day. My children, Allah has given us Khartoum for our own. Who live, shall divide the women of the infidels. Who die, shall sup to-night with the hours in Paradise!'

With one fierce shout of 'Jehad! Jehad!' the black wave, thus encouraged, swept resistlessly onward, each man tumbling over his neighbour in his eager haste to inherit the blessing. Their red eyes gleamed bright in the glare of the fires: their long matted curls of woolly hair blew loose about their thick bull necks in wild and horrible confusion. A mingled gleam of spears, and short swords, and firearms, and naked black thighs, seemed to dance all at once before Linnell's vision. Huge African hands, begrimed with smoke, and spattered over with stains of blood and powder, wielded Remingtons and bayonets and savage native weapons in incongruous juxtaposition. It was all hell let loose, with incarnate devils rushing fiercely on, drunk with slaughter

and mad with excitement. Sir Austen himself stood firm, like a practised soldier. 'Fix bayonets!' he cried, as they broke against his line. But his little band of weary and siege-worn Nubians faltered visibly before the shock of that terrible onslaught. 'We must fall back,' he whispered half under his breath to his cousin, forgetful that his men couldn't have understood even if they heard his English; 'but at least we can fall back in good order on the Palace, with our faces to the enemy, and die with Gordon!'

At the word, Linnell waved his right hand wildly above his head, and turning to the little band of trained Nubian allies, cried out in Arabic: 'Stand your ground, men, and retreat like soldiers. We go to die with Gordon Pasha!'

The Nubians answered with a feeble cry of assent, and fell back a pace or two.

Then their assailants burst in upon them with a frantic yell of triumph. 'Infidels, sink down to hell,' the dervish shouted at their head in a voice of thunder; and leaping into the air, fell himself as he spoke, riddled through the body by a second bullet from Sir Austen's six-shooter. His followers paused for some seconds as they saw their captain's blood spatter the ground: then another naked warrior, one-armed and one-eyed, with a rifle of the newest Woolwich pattern brandished madly in his hand, and a bundle of strange charms, for all clothing, hung loose round his neck, sprang forward with a bound and took the fallen leader's place in quick succession. Waving the broken stump of his left arm excitedly round his head, he cheered on his horde, drunk with hashisch and fanaticism, to attack the infidels and inherit Paradise!

Step by step and corner by corner, Sir Austen and his little body of faithful adherents fought their way back, retreating all the time, but with faces to the foe, through the narrow alleys and covered bazaar, in the direction of the Palace. As they went, their number grew ever smaller and smaller: one weary Nubian after another fell dying on the ground, and the Mahdi's men rushed fiercely with bare feet over his prostrate body. Now and again, a stray shot was fired at the assailants by an unseen friend on some neighbouring house-top: but, on the other hand, as the defenders retreated slowly and in good order before the overwhelming force of the foe, their enemy grew each moment more numerous and more audacious. Black warriors swarmed down the narrow lanes from every side like ants from an ant-hill. Religious frenzy and the thirst for blood had driven the dervishes mad with frantic excitement. Their thick lips showed blue with congested blood; their eyes started from their sockets; great drops of sweat poured down their naked breasts and limbs; even those that dropped, stabbed through with bayonet thrusts, and those that flung themselves in their frenzy on the serried line of the retreating defenders, cried aloud to Allah with foaming mouths as they fell to revenge his Prophet, and the Mahdi, his servant, on the cursed dogs of infidels who had sent them to Paradise before their time.

It was hot work. Linnell's brain reeled with it. Their faces ever to the foe, and their bayonets fixed, the little band fell back, a step at a time, disputing every inch of that narrow pathway.



At last they reached the great square of the town, where already other hordes of the frenzied fanatics were engaged in a ghastly and indiscriminate slaughter of all whom they came across. In the far corner, by the wall, a little band of terrified Greek women, the wives of merchants who had refused to flee before communications were cut off, crouched all huddled together near the *État Major* buildings, where some faithful black troops were endeavouring in vain to guard and protect them. Even as Linnell looked, the Madhi's men burst in upon the poor creatures with a headlong rush, and swept away the soldiers with their deadly onslaught. One unhappy girl they actually hacked to pieces before his very eyes, tossing her head in derision as soon as they had finished on to the flat roof of a neighbouring whitewashed building. The rest, they drove before them with their spears into the further corner, where a fierce band of dervishes with grinning white teeth was already beginning to collect a living booty of women; while a second horde of marauders, turning fresh upon Sir Austen's own tiny company of worn and wearied negroes, rushed fiercely upon them with a loud cry of 'Mashallah; death to the infidel!'

Sir Austen gave the word to his men, in his scanty Arabic: 'To the Palace. To the Palace. Quick march. Keep order.—There's nothing to fight for now,' he added in English to his cousin, 'but to save Gordon from unnecessary torture.'

### THE OTTER.

THE Otter, once so common throughout the United Kingdom, has, like the badger, marten, and wild-cat, gradually become rarer, though fairly numerous in Devonshire, Cornwall, and also in other of our more western English counties; and even more so in many parts of Scotland, Wales, and Ireland. The animal still inhabits certain reaches of the Thames and its tributaries, and where preserved for hunting purposes, may be said almost to hold its own.

The habits and natural history of the otter have been so often fully written upon, and discussed at length by well-known authorities, that one would imagine the character of the animal, good, bad, or indifferent, to be thoroughly established and set at rest for ever; and yet, strange to say, great difference of opinion prevails among sportsmen and naturalists as to how the otter hunts his prey? what his manner of seizing fish? what his power of dealing with fish of large size? and last, though certainly not least, whether the otter is a thoroughly mischievous animal in a salmon river, as alleged by many, or if the contrary is the case? There are many who maintain that so long as the creature can obtain food in the shape of eels and other small fry, he will only occasionally kill a salmon. The same writers also assert that the otter does little harm to the salmon-fisher by disturbing the pools inhabited by the king of fishes; some even deny that the otter has the strength to cope with and slay a lusty salmon. However,

it may be safely said that the majority of well-experienced sportsmen, accustomed all their lives to frequent the banks of salmon rivers, and then, by careful observations, to draw right conclusions, hold the exact contrary opinions to the above. This ancient controversy on the otter *versus* the salmon has recently been again revived, and many new and interesting points in the natural history of the otter have been brought to light. The writer's sole object in relating his own personal experiences with this highly interesting animal is the hope that something new may be found among his observations on the subject.

For many years I resided on the banks of a salmon river in the south-west of Ireland. My lodge stood in a wild, out-of-the-way spot; and within a few hundred yards of my door lived a family of otters. I constantly met with them at all times and seasons, and had every opportunity of observing their habits, their particular food, and manner of obtaining it. The chief stronghold of these otters lay near the brink of a waterfall, though they often frequented a wooded island immediately opposite to my house; but the side of this waterfall was their chief resort, and here, or in other resorts of the kind not far away, they remained throughout the greater part of the year. In the height of summer and towards autumn, when the grass and undergrowth became very thick, the otters appeared to migrate up stream, and I believe that about this time they also followed the large lake trout ascending the small streams for spawning. But at anyrate the animals always reappeared in their old haunts later on, and in increasing numbers, for they generally brought back their young ones. I should mention that the river alluded to is of comparatively small size, rising in an upland loch, and flowing through a mountainous country for some eight or ten miles till it falls into a large lake, again to reappear lower down, and eventually find an estuary in a branch of the sea. Once upon a time this particular river was famed for its early salmon-fishing; but what with poaching and over-netting it has, like so many others, fallen off in this respect. The banks of this stream were in many parts thickly wooded and rocky, so much so as to be often impassable to human beings, the roots of trees—chiefly fir, holly, and stunted oak—projecting into the stream. The deep clefts and hollows under the overhanging bank, worn away by the torrent, and here and there choked up with tangled creepers, rank undergrowth, and driftwood, formed many a snug retreat for the otter, and from which the best hounds in the world could not oust him. Though I seldom met with the otters during the daytime, they sallied out from their hiding-places after nightfall, and we often heard their soft whistling cries in the still evenings.

When my fishing commenced on the 1st February I very soon learned that I was not alone in search of sport. Not once or twice, but continually, I came across the remains of fish lying on rocks or dragged out high and dry near the water's edge. Many a time we carried home

what the otter had left, for our own dinners, but this was not soothing to the angler's feelings.

So long as the river continued in flood and the salmon were able to push up the river, our sport was fairly good; the harm then done to the pools by the otters was perhaps immaterial; but when the water fell, and the river settled down into fishing order, I found the animals to be most annoying and destructive. They not only killed the finest fish in the pools, but so harried the water when hunting their prey at night that it was useless my attempting to fish the following morning. The sand and mud on the margin of the stream was often covered with the fresh webbed footprints of the otter; there were regular runs through the rushes and grass where the animals had been passing to and fro to the water, and not unfrequently the scales of a newly-killed fish glistened on the strand. The terrified salmon, driven from their natural resting-places, where my fly would have met them, were hidden away down in the deepest part of the pools, where it was useless attempting to take them, and where they would remain for days after.

I noticed a remarkable fact about this period of the year in connection with the character of the otter, which goes to prove that he is undoubtedly a dainty feeder. During the early spring months—February and part of March—the river was full of kelts or spawned salmon on their return journey down stream to the sea. These ravenous foul fish are a perfect nuisance to the angler, affording no sport when hooked, and trying his patience and temper to the utmost. At this particular season of the year these kelts greatly outnumbered their lusty brethren the spring salmon, fresh from the sea and bound up stream; and, moreover, they offered a far easier prey to the otter, had he been inclined to catch them. But not so; the cunning animal preferred the new run salmon for his edible qualities, rather than the soft, tasteless spawned fish. Many a time we found the remains of fine clean fish, but hardly ever a kelt.

Again, as to the otter being a wasteful feeder: of this I had clear and constant proof. We generally found a fish killed by an otter to be minus the head and shoulders. Often, however, a small portion was eaten away from the neck only. The tail and lower part of the body were always left to waste on the river bank. There could be no possible mistake as to how these fish had come to their end. There, in the firm hard flesh, were the clean-cut teeth-marks of the destroyer, with sometimes evidence of the otter's claws on the silvery side. The otter seldom if ever devoured the whole fish; and further—unlike many wild animals, who return to their prey for a second meal—I never knew an instance of this occurring with the otter. When once he quitted a fish, he did so never to return, no matter how small a portion had been devoured in the first instance.

I will mention one case in point out of many I could instance, tending to show that this is one of the characteristics of the otter. I happened to be staying at an hotel on the river I have described, in company with several other anglers. In the month of March we particularly noticed a salmon of unusual size. He had come up the

river in a recent flood and taken up his position in a well-known cast. We all had a try for him. Flies by the dozen, of every size and hue, were temptingly put in front of him, but in vain; he would not be taken in by any one of our lures. At length the river became so low that fishing was out of the question; but we repeatedly saw the 'old lodger' leaping in the same spot where we had marked him down. There he was left in peace for several weeks; but his most deadly enemy, the otter, discovered his retreat and killed him.

One day, when out walking, we chanced to pass by the spot, and there, lying full length high and dry on the grass, lay the old salmon. To all appearance he had been dead only a few hours. There was no mistaking our old friend. The same copper-coloured sides—showing that he had been many weeks, if not months, in fresh water—a large almost ugly head, with the deep hooked lower jaw of the male salmon. The otter had evidently clutched the fish below the body, and from behind, and having dragged him to land, had eaten a small portion of the very best part—across the neck and shoulder—and left the remainder. The fish, though by no means beautiful in appearance, was a clean salmon, perfectly good for the table; but his general appearance was not in his favour, so we left him where he lay. I visited the spot several times afterwards; but the otter never returned. Now, here was an instance of a fine healthy fish, weighing probably sixteen or seventeen pounds, sufficient, one would suppose, to feed a whole family of otters for a considerable time, being utterly thrown away, and thus clearly confirming my former assertion, that the otter is a dainty, wasteful feeder, making one meal, and *one meal only*, off each capture he makes.

I believe that in hunting salmon, as also with other fish, two otters generally take part together in the pursuit, each alternately taking up the running till the salmon becomes exhausted and at length falls an easy prey. I have watched two otters thus at work, but in this instance their efforts proved unsuccessful.

It was one still evening in early summer, just before darkness set in, I happened to be out for a walk, and suddenly came upon two otters busily engaged hunting a salmon in a long stretch of dead water, but a very favourite resting-place for heavy fish. I watched the animals for several minutes. First one and then the other appeared. The salmon kept deep down. I never once saw him near the surface. Eventually the otters lost their intended prey among a number of rocks, roots, and sunken trees at the far end of the pool; but they took their departure so suddenly that I remember thinking at the time the creatures had discovered me.

It is the habit of the otter to have a particular station on the bank of every pool, generally the highest point whence the creature can survey every part of the water. An observer can always discover these spots by the unmistakable signs left by the animals.

It would appear that the otter invariably seizes his prey from below. On carefully examining dead fish killed by the otter, I often discovered the exact spot where the fish, to all appearance, had been first seized. I have also at different

times killed with the fly seven or eight salmon, some of them severely bitten by seals or otters. Every one of these was injured below or on the side, none of them on the back. In two instances when the river was low, and it was impossible for fish to travel up from the sea, the salmon killed by my rod had been undoubtedly wounded by otters; the tears in the flesh were quite fresh, almost bleeding. It seems strange that a salmon should take a fly or any other lure under such circumstances, but so it was; and I may mention that a very experienced Irish fisherman, who constantly accompanied me in my rambles, assured me that one of these mauled salmon would rise at a fly more readily than any one of his comrades in the pool.

The otter, though constantly residing close to the water, yet carefully chooses a dry spot for his home. Often, though not always, the entrance to his den is beneath the surface. Like most wild animals where left undisturbed, the creature will sometimes come out from its retreat to bask in the sun. A friend once walking along a river-bank in Ireland accompanied by an Irish setter-dog, observed the latter come to a dead set near to a bush growing on the margin of the water; and on walking up to see what the dog's attention was taken up with, a large otter plunged into the water and made off. The animal had been lying, probably asleep, in a hollow of the bank, enjoying the warmth of the mid-day sun. When suddenly alarmed, as in this instance, the otter makes a heavy splash and often dives out of sight instantaneously; but at other times, when engaged fishing, the creature glides into the water almost noiselessly.

The eyesight of the otter is specially adapted for nightwork, and in the dusk of the evening the animal is extremely vigilant, immediately detecting a moving object. But in the full glare of the sun the exact contrary is the case. I have stood within a few yards of an otter under such circumstances without being perceived. On one occasion, when fishing, with the river in high flood, an otter glided out of the water on to a rock close in front of me, and until I moved, was quite unaware of my presence. This particular animal was not, so I believe, bent on fishing, but the rising water had probably forced him to quit his retreat under the river bank.

The sense of hearing in the otter is strongly developed, the slightest sound attracting its attention; and the power of smell is still more marked. The otter is an extremely wary creature, ever on the alert against danger. The best of trappers often fail in their endeavours to take him. Unless the trap be very carefully and skilfully set beneath the surface of the water, the animal will at once detect the snare laid in its path.

Finally, I am of opinion that the statement so often made as to the otter in salmon rivers, or where large trout abound, contenting himself with eels and other small fish, and not interfering with the more valuable quarry, does not hold good, but that the very contrary is the case. I believe that the otter, from pure love of good feeling, will endeavour to catch the best fish in the pool.

It is unfortunate that truth has compelled me to pronounce against the otter in almost every

point of his character that I have touched upon; nevertheless, I should be the last to advocate the extirpation of this highly interesting animal.

J. H. B.

## A BURMESE GENONE.

### CHAPTER III.

'If you have promised to marry her, you ought to keep your word.' That was Mabel Grane's opinion; and in his present frame of mind, a far less definite pronouncement would have determined George Farnwood's course. The sentence rang in his ears unceasingly; he harped upon it until the words almost lost their meaning; but what it implied struck deeper and deeper every hour. He might fulfil his promise to Mah Mee without inflicting pain on any one but himself, since his affection for Mabel had called no responsive love into being; and he dismissed all thought of attempting to buy back or set aside his pledge.

As though the Fates were resolved to give him no excuse for further delay, the *Gazette* issued next day contained the long-expected paragraph announcing his promotion; and George Farnwood hardened his heart, and began to cast about him for a messenger to whom he might entrust the task of bringing Mah Mee and her mother to Rangoon. Chance placed in his hands the man he required in the person of Moung Louk, his old sergeant. That officer had reaped the reward of cowardice in degradation to the status of constable, and in that capacity had for some weeks carried a truncheon in the streets of the capital. Strict attention to duty and good behaviour might in time have regained for him the position he had lost; but between small pay and great temptation Moung Louk came to grief. He accepted a trifling consideration for closing his eyes to the illegal doings of certain Chinese gamblers on his 'beat,' was found out, compelled to disgorge, and promptly dismissed the force. Mr Farnwood's intercession had saved him from severer punishment, but of this the man was not aware. He was in great straits for money when that gentleman sent for him, and was only too glad to undertake anything that would put a little coin in his pocket.

Oh yes! he would certainly go up to Shway-doungyee and bring the women down to Rangoon: all the honorific appellations in the Burmese tongue could not express his reverence for Tharnwood' Thekin and eagerness to serve him. So, with fifty rupees against expenses, he was sent forth on his errand.

For a day or two after she had been taken into Mr Farnwood's confidence, Mabel made a half-hearted attempt to hold herself at a greater distance from him. He was engaged to another girl, and so had no right to cultivate the intimacy that had arisen between them to the extent he had done; he had deceived her, and had brought about misunderstandings between her mother and herself. And Mabel tried to believe that this man was nothing to her, even as he never could be more than a friend at most. But this forced reaction could not last very long; she soon found herself seeking excuses for his

conduct, and discovering sound reasons to extenuate it. He had been in no way bound to reveal his engagement to Mah Mee; as he had himself explained, his own interests compelled silence. Further, it was quite clear that he had no affection for this Burmese girl, and was only going to marry her from a high sense of duty. Mabel Grane had not been a woman if, in her bitterest moments—and they were not very bitter after all—she had condemned him for loving herself; and increased respect for his unselfishness, coupled with sincere sympathy for his unfortunate position, not only dissolved the resentment she had attempted to nurse into life, but drew her nearer to him than before.

When, therefore, he informed her that he had resolved to abide by his promise to Mah Mee, and had actually despatched a man who knew the girl to escort her to Rangoon, Mabel did not attempt to conceal the sympathy she felt. She had, too, a vague suspicion that the unthinking speech with which she had cut short their last conversation might have influenced him in his decision; and though she could not recall the words without betraying her regard for him, she was quite unable to let the matter rest where they left it; the ice had been broken, and she intuitively knew the young man would not be disinclined to discuss his fiancée.

'Mr Farnwood,' she began, 'you will believe that it is not altogether curiosity, but may I ask you about Mah Mee? I can't help feeling a certain interest in her.' She coloured hotly as she spoke, and George Farnwood's pulse beat faster as he saw it.

'What can I tell you about her, Miss Grane? She is just such a girl as you may find any day in a jungle village.'

'Is she educated at all? Can she speak English?'

'She has as little general information as a child of three years old,' answered Mr Farnwood. 'She does not know a word of English, and has no more refinement or manner than a coolie. It is not nice to say so, but you may as well know the truth.'

'It won't be very pleasant for you to live with her in a large station,' remarked Mabel after a pause.

'It won't be very pleasant anywhere.'

If words could undo words, Mabel Grane's assertion that he ought to keep his promise would have been wiped out for ever.

'Does Mah Mee know what you lose by marrying her?' she asked abruptly.

'Oh no! These are matters quite beyond the scope of her understanding.'

'I should think she would be miserable when she does understand it.'

'We must not apply our standard of love to the affection a half-civilised Burmese girl is capable of entertaining,' said George Farnwood slowly. 'Although Mah Mee risked her life, and would have laid it down eagerly to save me from physical injury, it would never occur to her to refuse to marry me because the marriage would be prejudicial to my future: that is a kind of self-denial absolutely foreign to her and her class; it is beyond their comprehension.'

'It is the love of an animal,' said Mabel. 'But surely she must know that she has nothing in

common with you; that you don't care for her. Don't you think you prepare disappointment for her, besides horrible bondage for yourself in marrying her?'

'I don't know, Miss Grane,' answered Mr Farnwood despairingly. 'I don't believe the poor creature will ask more of me than that I will tolerate her dog-like devotion. I hope not, for her own sake.'

Mabel said no more: she felt that if she spoke again, her own love must overflow, and bid him shake himself free of this hideous entanglement.

Mr Farnwood had calculated that it would take Moung Louk at least two weeks to accomplish his mission if he made good speed: he had to cross the Gulf of Martaban by steamer to Maulmain, where he would take passage by launch as far as Thatone; thence it would be necessary to proceed by boat or canoe, as the small weekly mail-launches which maintained communication with 'up-river' stations would not give accommodation to natives travelling on other than Government business. He had not felt called upon to say anything to Moung Louk relative to his intention regarding Mah Mee; indeed, explanations would have been superfluous, for he was quite aware that his offer of marriage to the girl was public property in Shwaydouggee twenty minutes after he had made it.

He utilised the period of grace granted by his messenger's absence to make arrangements for the reception of the girl and her mother. A tiny house on the outskirts of cantonments was offered him at a small rent by a trader in the bazaar, and he furnished it with the few trifles necessary for their temporary residence. That done, he sought out the chaplain, and ascertained the forms to be executed when he should call upon that gentleman to perform the ceremony prescribed for such unions by the Indian legislature. These matters took some little time, and he awoke one morning with a feeling of miserable surprise to recollect that this was the day when Moung Louk might be expected to return with Mah Mee.

How the day passed he never knew; he could not compose himself to sit down and read for ten minutes together; and even the hours Mabel spent with him seemed to drag by on leaden feet. He was almost glad when the signal denoting the approach of the Maulmain steamer was hoisted on the flagstaff; and he prepared to go down and meet the vessel in nervous haste. He must be on the wharf to receive the party, or Moung Louk might bring the women up to Colonel Grane's house—a contingency against which, for several reasons, it was advisable to provide.

He reached the pontoon in good time, and took his stand under the iron roofing to await the vessel, which was now creeping alongside. He watched the throng of native passengers as they crowded down the gangways until the ex-sergeant's well-known face appeared. He strained his eyes to see who was with the man; women there were, and girls in plenty, but none he had ever seen before. He forced his way through the crush, and waited at the bottom of the gangway in breathless eagerness until Moung Louk reached him.



'Where are Mah Lay and Mah Mee?' he asked hurriedly.

Moung Louk dropped the rush-basket *pah* which comprised his luggage and crouched at his feet. 'My lord,' he answered, 'the news is bad—Mah Mee is dead.'

Dead! George Farnwood asked no further questions, nor did he cast another look upon Moung Louk's stolid face. He turned, fought his way out of the crowd, and hailed a *gharry*; and two minutes after he had received his release, he was driving back to cantonments as fast as the driver could urge his pony. He was free! If Heaven's forgiveness be needful for one who rejoices in the death of a fellow-creature, George Farnwood stood in need of it that day.

'You must wait until your father's return,' Mabel, said Mrs Grane, when that evening her daughter told her she had promised to marry George Farnwood. 'I can't say anything about it. I—I have no doubt it will be all right, since your father thinks so highly of him; but I'd rather you did not ask my opinion at all.'

So Mabel, having received this very suggestive hint as to the nature of her mother's opinion, forbore to press for franker expression of it, devoutly hoping that when she recovered her disappointment, she would adopt a more kindly attitude towards George and herself. The date of Colonel Grane's return was uncertain, as also were his movements, and as neither letter nor telegram could be trusted to reach his hand while he was 'in the district,' the two young people sought comfort and encouragement in each other's society.

The situation, nevertheless, was not an agreeable one, for Mrs Grane shrouded herself in forbidding silence, and never addressed a remark to Mr Farnwood beyond those imperatively demanded by the barest courtesy. Allowances must be made for the mother's feelings; as she told her husband when first she observed the growing attachment, Mabel had received attentions from the most eligible men in the station; and she had been keenly anxious for the worldly success which it seemed within her daughter's power to grasp.

Moung Louk made his appearance next day to render an account of his mission and claim the reward he had been promised. Mr Farnwood and Mabel were alone in the house when he came, and the former interpreted the man's circumstantial report as he offered it. Moung Louk's story was a long one, and its interest was not enhanced by the remarkable exactitude with which he detailed the various sums he had disbursed. Suffice it to say that on his arrival at Shwaydoungee, Mah Lay had greeted him with the news that Mah Mee had succumbed to fever three weeks previously. She had suffered much with her arm, and the pain brought on continual attacks of high fever, which she was too weak to combat. And as Moung Louk ended his recital, George Farnwood felt himself choking with remorse for his joy of yesterday: the poor girl had, after all, paid with her life for her devotion.

He glanced carelessly over the dirty 'account' Moung Louk submitted for payment and dis-

charged it without a word. His mind was too much occupied with graver thoughts to examine it closely, and he scarcely noticed even to himself that the total was extravagantly large. Nor did he remark that the man left the house with his money omitting to repeat the request he had previously put forward, that his old officer would exert his influence to procure him some humble appointment he coveted.

Mrs Grane having heard from the servants that a Burman had paid a long visit to Mr Farnwood and Mabel, unsuspectingly asked the latter what had brought him to the house; and the young lady, glad of another opportunity to speak of her engagement to her parent, explained at length.

'So he says the girl is dead,' remarked Mrs Grane dryly. 'Does Mr Farnwood believe it?'

'Why, yes, mother!' answered Mabel in astonishment. 'The man has been up to Shwaydoungee himself—there can't be any doubt about it.'

'I wouldn't be too sure of that, if I were you,' rejoined Mrs Grane. 'Natives have a wonderful talent for inventing stories "to please master."'

'But Moung Louk could have had no motive for telling an untruth, mother; he knew that George meant to marry that poor girl.'

'I daresay Moung Louk had a very tolerable idea of the answer Mr Farnwood wished him to bring,' said Mrs Grane.—'We won't say any more about it now, Mabel; but don't blame me if you find yourself involved in some horrible scandal. If I were Mr Farnwood, I should want some better evidence than the bare word of a native in such an important affair; but I can quite understand he is not difficult to convince.'

There was something of a sneer in her last words, which seemed to imply that she suspected George Farnwood's honesty; and Mabel's indignation deprived her of speech. As a matter of fact, Mrs Grane had no doubts regarding the young man's veracity or that of his messenger; she had no more definite object in view than to disparage him generally; but had she deliberately sought means to estrange her daughter, she could not have discovered any more effectual. From that day Mabel never touched upon the subject; and the relations between mother on the one side and the affianced pair on the other became so painfully strained that Mr Farnwood felt he could no longer remain in the house.

'I'll just move my things over to Roger's bungalow,' he told Mabel. 'It is quite impossible for me to stay here. I would have left long since, had it not been for the Colonel's wish that there should be a man in the house at night; and even now I'm by no means sure I am doing right in going.'

'Of course I am prejudiced,' said Mabel with a slight smile; 'but I think you ought not to leave. I know how excessively unpleasant it must be for you here, and am not a bit surprised at your wanting to go. But, George, if there ever was good reason for your being here, it exists now. Mother admitted only two days ago that she was thankful papa had asked you to stay with us.'

George Farnwood frowned in perplexity. His position was undoubtedly a very awkward one,

and he was at a loss to decide what course to take. Mabel was right in saying that if there ever had been good reason for his presence it existed at this time. Colonel Grane's anticipations had been abundantly realised by perpetually recurring burglaries of the most daring description both in town and cantonments; there was positive danger in leaving two ladies alone with no protection but that of natives. Colonel Grane's house, by reason of the owner's official position as Inspector-general of Police, was just the one bad characters flushed with success would select for a nocturnal visit if they thought possible to make it with a fair chance of escape. An act of such seeming bravado as to plunder the residence of the head of the police department would have great attractions; and George Farnwood felt that it was his duty to remain at the post his chief had assigned to him.

He was confirmed in his decision by a letter Mabel received from her father, which announced that his return might be looked for in the course of the ensuing week; and as that event would permit Mr Farnwood to leave without risking any unpleasantness with Mrs Grane, he resolutely blinded himself to the petty slights which caused him to feel more than an intruder, and remained where he was.

Both he and Mabel looked forward with double eagerness to the Colonel's arrival: it lay with him to sanction or veto their engagement; and though Mabel was exceedingly sanguine, the gentleman's modesty precluded his imagining he would be effusively accepted as a son-in-law.

Any apprehensions he might have had were quickly dispelled when he approached Colonel Grane with his request.

'As far as the man himself is concerned,' said the father, laying his hands on George Farnwood's shoulders, 'I am more than satisfied with Mabel's choice. But we must not talk about marrying yet a while; you must wait until matters are more settled in Upper Burma; the service may require that you be sent there, and it's no place to take a lady at present.'

To which Mr Farnwood was obliged to assent. He had no idea of asking Mabel to share such a life as it had been his lot to lead at Shwaydoun-gyee, with a larger element of danger thrown in. But he had been in hopes of obtaining an appointment to some more civilised place, and said so straightforwardly.

'You may be sure I will do my best for you,' answered the Colonel kindly. 'You have done your full share of jungle-work, and we shan't forget that you rid the country of two such pests as Boh Than and Boh Tsine. The Government fully recognises your claim upon it, and if any plums are going, you won't be passed over.'

His cordiality urged George Farnwood to make a clean breast of his intended relations with Mah Mee, and he did so as briefly as he could.

'I am sure you will believe me when I tell you the poor girl had no claim upon me whatever except that she established by her behaviour in the Boh Tsine affair,' he concluded earnestly.

'I take your word for it, Farnwood,' replied Colonel Grane. 'You were in no way bound to reveal your purpose to me before; and as things have turned out, I'm sincerely glad you did not. I should have made Ritchie send you off home

for twelve months, had I known it: you were going to ruin your career.'

If George Farnwood had been amenable to persuasion, he would have stayed on with the Granes until his name had been removed from the sick-list; but now the Colonel had come back, his services as *chaukidar* were no longer necessary, and he adhered to his resolve to move. In short, the day after his engagement had been sanctioned, he packed up his traps and joined a bachelor friend in a little bungalow about five minutes' walk from the Granes' dwelling. The cool mornings and evenings, which grew more bracing and delightful as January drew on, he spent riding or driving with Mabel; but the intervening hours hung heavily upon his hands, for his chum, who belonged to the Public Works Department, was much away in the district, and, as he often complained, paid rent for a bungalow he slept in twice a month. The European population of India is essentially a busy one, and go where he would, to club, library, or mess, George Farnwood rarely found a fellow-idler with whom to while away the time. The doctor, to whom he now made almost weekly applications for a certificate of restored health, urged him to try to expedite his recovery by a trip to Northern India; but as that implied a total separation from Mabel, he was not inclined to act upon the suggestion. It was of course well known in the station that he was engaged to Miss Grane, and he was indebted to the hospitality of his fiancée's friends for frequent opportunities of spending a day with her. Mrs Grane's antagonism had become no milder, and except when the Colonel was at home, he seldom went to the house.

Two months passed away, and the cold season had faded into stifling heat; the Saturday cricket matches were over; punkahs were no longer voted unnecessary at breakfast and dinner; and the most seasoned resident was glad to seek shelter from the sun at half-past eight. George Farnwood had made good progress towards recovery, and had extorted a promise from Dr Ritchie that he should be allowed to 'rejoin' in a fortnight. He was very eager to get back into harness. Colonel Grane had been as good as his word, and had procured him the pleasantest berth the Police Department offered for a junior officer. He was to be 'Personal Assistant' to the Inspector-general, and in that capacity would accompany his chief wherever duty might take him. No more banishment in the jungle! Rangoon for headquarters, with occasional journeys about the province. He could not have asked anything better. When absent from Mabel, he need never lose touch with her, as he might have done in a solitary station where 'mails' were few and far between; and there was no chance of the authorities losing sight of him.

The vice-regal proclamation announcing that Upper Burma had been annexed to the British Crown had been issued, and the seat of the local government was temporarily taken up at Mandalay. There were gathered together the Chief Commissioner of the province and the heads of departments mapping out the first scheme of administration of the new territory. Colonel Grane, as a matter of course, was among the number, and although the condition of affairs in the Rangoon bazaars had not improved for the

better, Mrs Grane and Mabel were alone. The Colonel had been made painfully aware of the attitude his wife adopted toward their daughter's future husband, and had refrained from asking the young man to reinstate himself in the house.

The pair had been out for a ride one morning as usual, and were cantering easily down the road towards the bungalow where George Farnwood was wont to leave Mabel. As they pulled up to enter the compound, a Burmese girl, who had been sitting in the shade opposite the gate, rose and looked so fixedly at them that Mabel drew her companion's attention to the fact.

'That girl seems to know you,' she said. 'Do you'— She stopped short; George Farnwood was staring at the girl with a face as white as his coat.

'My God!' he exclaimed with ashy lips, 'it is Mah Mee!'

### RAILWAY STATION-INDICATORS.

EVERY railway traveller knows the discomfort and annoyance which are caused by a hurried attempt to discover the name of a stopping-place. On a cold windy night, as the train draws into a station, one may have to lower the window, shout frantically to a porter, and perhaps learn, when once more in motion, that this very station is one's destination after all. Or one may be crossing England from the north with an elderly nervous lady, who will ask at intervals from the Border downwards, 'How many more stations is it to London, please?'

In the early days of the railroad, before station-names were overshadowed, as they now are, by the staring advertisements of traders, this feature of railway travel attracted the attention of inventors. Thirty years ago, two Frenchmen patented in this country a device—for which they secured provisional protection only—for 'placing in each compartment an apparatus operated upon by the guard or other official in such manner as to bring the name of each station in succession into view before the train arrives.' Since that time, scores of ingenious attempts have been made to solve the problem of a station-indicator, and at least three dozen of them have been accepted by the Patent Office as novel combinations. Inventiveness in this direction has not been confined to engineering experts; many a man—a 'florist' or a 'photographer,' a 'wool-stapler' or a 'game-dealer'—instead of grumbling in the *Times*, has set his wits to work to overcome the evil. Although automatic arrangements of this sort are to be met with here and there in the States, British railway-men have not hitherto shown much eagerness for this needful reform. For this reason, it may be of service to summarise the result of thirty years of inventive work, that the travelling public may perceive whether the acknowledged terrors of station-finding must perforce be endured for lack of remedy.

Observing at the outset that a device is not of necessity practicable because protected by letters-patent, it may be well to point out some limitations of the problem. To commend itself to a railway-man, an indicator must be capable

of instantaneous adjustment and readjustment—must not be influenced by speed-vibration or the concussion of engine-shunting—must be durable, interchangeable, easy to operate, and of reasonable expense. Many indicators fulfil more or less perfectly all these conditions, except perhaps—from the point of view of a railway directorate—that of cost.

Two classes of inventions may at once be dismissed. One comprises those arrangements which are actuated by a cord dependent from each carriage. Two insuperable objections lie in the way of their adoption: the loss of time involved in the march of a cord-puller from one end of the train to the other; and the ease wherewith unauthorised cord-pullers might throw the apparatus out of gear. In one system the names of the stopping-places are printed on cards bound bookwise; in another, on tablets secured to an endless chain; in a third, on curtains whose upper edges are fastened upon a revolving rod. Any one of these is, however, readily adaptable to a tramcar or omnibus—this description of vehicle having, in fact, its own army of eager inventors at its heels. It is curious to find that this least efficient of all principles is the only one at present in use in this country. On the new South London Railway, at the suggestion of one of the men, a simple slide arrangement has been introduced experimentally on one or two carriages. It is operated directly by the hand of the guard, and although of much utility, does not seem to be regarded by the authorities with favour.

The other inadmissible principle is that utilised in the construction of the pedometer. A good example of this system is one devised by a Scottish mechanician fourteen years ago. A dial-pointer is geared to the carriage axle by means of a pitch-chain, so that the number of miles traversed by the train is indicated to the traveller at the proper intervals, station-names being marked on the dial radially. Apart from the inconvenience of a closely-printed dial-face, demanding close study, the time-principle is objectionable, because it requires a train to start invariably from the same spot of the same terminal, and does not take into account the fact that wheel-revolution is disturbed by the variable and irregular action of the brake. Still less practicable is a 'Frisco' idea patented a couple of years ago, which consists of a cylinder geared to the car axle, and timed to make a given number of revolutions between any two stations, however distant.

A first analysis of indicator-systems groups them into two great classes: those which are operated by the guard or the engine-driver; and those which are operated by obstructions in the path of the train. Each principle has advantages of its own; and while the latter is the more favoured by mechanicians, the former is to be preferred for express services. The first difficulty to be surmounted is that of inter-carriage communication, most guard-operated arrangements involving extra couplings, and so increasing the labour of shunting. This difficulty is set aside by the principle of actuating the indicators in each carriage from mechanism placed in the permanent-way. But this introduces a new source of danger, for no such obstruction could

possibly withstand the impact of an express train.

The difficulty referred to of inter-carriage communication is reflected in the inventions which involve guard-action. There are a dozen in all, of which two rely on mechanical means, two on pneumatic action operated by the guard, one on vacuum-brake action operated from the engine, and seven on electro-motive force. From the fact that only one of the first five specifications was ever completed, it may be inferred that the inventors themselves doubted the worth of their systems. The very first Englishman who turned his attention to the subject thought to twist a notched disc—whereon station-names were to be painted radially—by setting the guard to pull a wire extending over the carriage roofs, and so rotate a cog-wheel engaging with the notched edge of the disc. Another introduced a complex notion which the free habits of British travellers would never tolerate. He would have the guard pull a cord on entering the station, releasing a door-bolt in each carriage, and so permitting ingress and egress. When the train started again, another twitch of the cord would bolt the doors and also twist a notched disc, thereby presenting to view the name of the next station.

Some years ago a Pennsylvanian gentleman invented a system of collapsible vacuum-pipes, or rigid pistoned cylinders, to extend beneath the carriages, and to be connected on the engine with a steam siphon operated from the boiler. It would have the objection of giving extra work to the engine-driver—of itself fatal—to say nothing of the ever-present peril of collapse or leakage. Two pneumatic systems have been worked out at different times by metropolitan inventors, the power to be derived from the brake apparatus, or from a reservoir charged by a pump located in the guard's van and actuated by the carriage axle. The uncertainties of such an arrangement would be quite forbidding. An American patent deriving its motive-power from a system of collapsing cylinders would probably be found on examination to have failed mainly on account of the wayward ingenuity of its arrangement of the station-names on loose piles of cards.

Of twenty inventions worked automatically from the permanent-way, five overlap with the class just discussed by providing an alternative method operated by the guard. Of the other fifteen, one only involves the use of electro-motive force. It may therefore be said, in general terms, that the recognised motor for indicators worked from the guard's van is electricity. Where this is rejected on the score of expense, the recognised motor for indicators worked from the permanent-way is the mechanical. Quite half the inventions which embody the latter principle have never been completely specified. But it may be instructive to pass them all under review, that, from the varied attempts which have been made to surmount them, the difficulties of the problem may be discerned.

Two inventions stand by themselves. One of them, the production of an ingenious 'florist,' fixes an S-shaped bar horizontally on the carriage roof by means of a vertical axle which carries bevil-gearing. The bar projects slightly beyond the width of the carriage, and engages with a

rigid rod located by the side of the rails just outside the station. Curiously enough, another amateur—professionally a 'photographer'—utilised the same principle two years ago by arranging rotatable rods transversely on the carriage roofs, with cog-wheels and radial arms, to be actuated by a rigid horizontal bar suspended over the roof-level. Such a device would be permissible, if at all, only on lines where the trains invariably stop at all stations and move slowly out of them. Any unusual speed would infallibly cause the derangement of the S bars or of the suspended catches, not to speak of the disturbance caused by the passage of heavily-piled goods-trucks.

A less exceptionable method is that of a contrivance riveted to the sleepers, or otherwise fixed in the train-path, at a convenient distance outside each station. The first completed specification introduced this principle thirty years ago. Dwarf-posts were to be erected in the permanent-way, and these were to lift a pendent rod geared to the carriage floor, and so rock a lever connected with an endless chain bearing the station-names. The following year a 'photographer' dabbled with the subject, thinking to actuate some simple sub-stage mechanism by a cog-wheel or prism made fast to the permanent-way. A twelve-month later a 'woollen manufacturer' tried his hand, and covered provisionally an arrangement differing in its actuating movement from the above by opposing a pendent rotatable shaft with radial arms to a roller fixed in its path. A still later idea was to weld a horizontal pin to the side of a rail outside each station, which was designed to strike a series of levers suspended under the passing train, and so to actuate indicator-drums by well-known mechanical means. The levers being knee-jointed and duplicated, the system would be effective in either direction. A variation of the same system carried the cord connecting the sub-stage contact-lever with the indicator-box right round the outside of the carriage—a device quite clumsy and impossible. In 1879 another invention was completed, contact with the fixed obstruction being secured by means of a running wheel, pendent from a vertical axle. A beautifully-ingenuous but impractical idea was thought out by a Londoner three or four years later. A pointer was to be caused to rotate in front of a dial to angular distances increasing with every station. A so-called contact-surface would be arranged outside the first station on the outward journey, at a definite distance inside the 'near' rail. Outside the second station the distance would be doubled, so that, whereas the pointer in the first instance would indicate '1,' in the second it would reach '2.' The contact-surface was to be three times the length of a station platform, to give travellers ample time to observe the movement of the pointer. The inventor admitted that, to provide for sixty stations, the increment of distance of the contact-surface from the rail would be only two-thirds of an inch per station, a difference too minute to be of practical service. Branch lines would also throw the station-series entirely out, and the system was therefore never actually placed on the market. The same fate befell an invention which consisted of a pendulum hung beneath the carriage, to swing lengthwise to the train, and to strike an inclined plane erected in the permanent-



way. The swinging of the pendulum actuated an air-pump, and so provided intermittently the power which worked the indicator.

During the last two or three years the number of patented inventions of this particular class has been comparatively large. Their details would be wearisome to the general reader. One of them places the indicator in the carriage-window, and so permits passengers to see from within the name of the station, while it presumably permits intending passengers to see from the outside the name of the next stopping-place. Three other inventions, all of Californian origin, while retaining the tripping mechanism in some form, discard the idea of the disc or the drum. One of them fixes the station-names on cards slotted in the notches of a wheel. Another binds the cards into a book, and by making them increase in size in regular sequence, enables them to fall into position one after another in their turn. The third pivots the name-cards radially on a drum. One of the latest ideas is to simplify the tripping mechanism very much, there being little more than a vertical rod running on a caster, which comes into contact with a permanent incline, and so actuates the name-roller.

The attempts which have been made to combine in one system the self-acting and the guard-acting principle have met with little practical success. A comparatively old idea is to actuate the indicator mechanically, either from the permanent-way or from the guard's van, rotatable rods being fixed lengthwise on each carriage roof, connected one with another by self-adjusting couplings.

Turning finally, then, to electric indicators, it may once more be observed that this motor seems, in the opinion of inventors, to be most suitably operated from the guard's van. A Scottish 'game-dealer,' it is true, has a plan for placing a series of magnets in the carriages, make-and-break contacts being effected from the permanent-way. But apart from this the system has an objection, arising out of the fact that the stations are to be pointed out on a dial bearing numbers, which have to be translated into station-names by study of a chart—a plan which ignores the elderly nervous lady. A dozen years ago an idea was partially worked out for sending a current from the guard's van through a wire connected with an indicator in each compartment, and an ingenious device was added whereby a passenger could set an alarm to go off when a particular station was approached. Such a plan would never be workable, for no long-distance passenger by a night-train would place himself at the mercy of a succession of short fares, setting the alarm at frequent intervals.

A 'watchmaker' who applied himself to the solution of the problem transmuted electric into mechanical power by means of a spring barrel, which would have to be wound up clockwise at periodical intervals. To be adopted at all, the period for winding would have to be long; a one-day movement, for instance, would never be accepted by railway-men.

It may be predicted that, if a station-indicator be ever adopted universally in this country, it will have to eliminate the demerits which attach to most if not all of the systems already proposed. Whether the station-names be displayed on a drum, a roller, or a dial, is a point which will

have to be settled by each railway line for itself. But the tendency seems to be in favour of the adoption, if at all, of some plan deriving its motive-power from electricity, and the general introduction of the electric light as a carriage-illuminant would immensely increase the chances of a station-indicator. The self-adjustment of the indicator from the permanent-way is a principle not to be despised, and will probably be introduced as an alternative. Indicators will be worked in this way in trains which habitually stop at every station; while in the case of express services they will be worked from the guard's van.

### SOME METHODS OF MODERN JOURNALISM.

RETROSPECTS of the past fifty years bring out many interesting facts concerning the growth of almost every department of our social, scientific, and industrial life. Among the many remarkable things associated with the later half of the century, the historian will certainly have to chronicle as a feature of the times the wonderful development in enterprise and influence of the newspaper press of the country. Journalism has shown a marvellous power of assimilating the fruits of scientific invention and new mechanical appliances. Improvements in machinery for the printing of newspapers have been eagerly taken advantage of, and there is now a widespread distribution of the 'Walter' Press, the 'Victory,' and other notable machines capable of printing and folding from twelve to fifteen thousand newspapers per hour. Such a fast-running machine, however, would not have been possible unless, in the first place, an immense step forward had been taken in paper-making. But paper-makers were equal to the occasion; and webs of paper two miles in length for use on fast-printing machines are now turned out at many mills. Any one visiting a newspaper office of to-day with its magnificent machinery under the care of skilled engineers, engines and machines duplicated and triplicated in case of accidents, cannot fail to be impressed with the immense strides which have taken place in recent years in the mechanical appliances for the production of the modern journal.

The great advances made in telegraphy and telephony have also been widely utilised by newspaper proprietors. If Puck's girdle of wires and cables has been put round the globe, the general community see the result in the budget of news, served up every morning at the breakfast table, from every country under the sun where anything of a noticeable character has transpired during the previous twenty-four hours. While this is true of the morning paper, it is in some respects doubly so of the well-conducted evening paper, of which as many as six and seven editions are published in the course of the day, presenting the news of the world with a freshness and fullness which really leaves little to be desired.

The great demand for the latest news has necessarily led to large additions being made to the staffs of the leading dailies. The Reporting

Department has been most augmented. In the good old days of weekly newspapers a reporter might have been included among the leisured classes. Now, there is no busier man. He must necessarily be active and energetic and of a nimble turn of mind, ready with his pencil, and with all his wits about him so as to seize upon the salient features of whatever event he has on hand, for presentation in a readable and attractive shape to the public.

One of the great problems the evening newspaper man has to solve is how to get his news transmitted in the quickest possible manner to the office with which he is connected. To save time with telegrams, for instance, the *Scotsman* proprietors at great expense put their offices in Cockburn Street, Edinburgh, into connection with the General Post-office there by means of a pneumatic tube. Formerly, a telegraph boy took five or six minutes to deliver a message. Now, it is blown through the tube in twenty seconds; and as there are hundreds of telegrams every day and night, the saving of time effected is great indeed. Attached to every evening paper office there is a corps of boy messengers, whose services the reporters can always command. The Edinburgh evening papers have also a trained service of carrier-pigeons for use at race-meetings, football or cricket matches, shooting competitions; and in out-of-the-way districts where there is no telegraph or telephone within easy reach, they are often very useful. In connection with the *Edinburgh Evening Dispatch* (with which the writer is most familiar), the pigeons are important adjuncts to the reporting staff. They are housed in quarters specially erected for them on the flat roof of the office, the dove-cot including an ingenious trap arrangement and electric bell. Many people have a very hazy idea as to what a carrier-pigeon can and cannot do. They seem to imagine that it is possible to send the bird out as well as in, and that with a little training it can even be induced to go to the nearest restaurant for the reporter's lunch. Of course that is all nonsense. What a reporter expects a pigeon to do is that it shall fly straight home from the place where it is liberated.

A few words as to how it is done. When a reporter desires to use the pigeons, he leaves word the night before with the person in charge of them. This is very necessary. When they are to fly far or on any particular business, it is better that they should only be lightly fed in the morning. The pigeons—two or four, as may be required—are caught in the morning, and placed in a comfortable wicker or tin basket—like a small luncheon basket—with compartments. The reporter when he leaves the office carries the basket with him. He also provides himself with a book of fine tissue paper, 'flimsy,' and a sheet of carbonised paper, 'a black.' He writes his report very legibly and compactly, so as to put as much on a page of 'flimsy' as it will possibly hold. Then he rolls the 'flimsy' neatly up and attaches it to the leg of the bird by means of an elastic band. Or he may send two pages of 'flimsy,' one on each leg. The pigeon being released, makes straight for home. In the carrier-pigeon the home instinct is strongly implanted; and if the bird has been taken off its nest, it has an additional reason for wishing to get back as soon as

possible. It also knows that there is a good feed of peas and maize awaiting it at the end of its journey.

Arrived at the newspaper office, it alights on the ledge of the dove-cot. To get through the usual circular-headed opening it pushes before it a couple of light wires, and these falling after it close the aperture. The bird is, however, not yet into the cot. It has only got the length of the trap. This trap, two feet square or so, has a flooring set upon an electric spring. The weight of the bird pressing down the spring, releases an electric current, which rings a bell in the sub-editor's room. The bird thus heralds its own arrival. A boy-assistant proceeds up-stairs, takes the pigeon from the trap, removes the message from its legs, and opening a sliding-door, allows it to enter the cot, where it is welcomed by its sorrowing mate.

Some of the pigeons fly straight and fast. Others are not so reliable. Few loiter on the way; but they frequently are in no great hurry, if the weather be fine, to enter the trap. They prefer to sun themselves on the ridge of a neighbouring house. The feelings of a sub-editor waiting for the end of a meeting or the result of a football match under such circumstances may be better imagined than described. At the Altcar coursing meeting the pigeon that brought the result of the final in the Waterloo Cup was shot as it neared its cot, so as to prevent the possibility of any such delay. But the Edinburgh carriers have not yet had such hard lines meted out to them. For press purposes, carrier-pigeons are seldom flown farther than twenty miles from home. But they are constantly in use within a ten-mile radius of the city, and often do good work. It was a carrier-pigeon that brought to Edinburgh the intelligence that the first train with Royalty in it had passed over the Forth Bridge. The bird was liberated from a carriage window of the royal train exactly in the centre of the bridge, and went home in about eight minutes. Other pigeons took messages from both sides of the Forth recording the progress of the ceremonials.

During the visit in October last of Mr Gladstone to Midlothian, the reporters of the evening papers in Edinburgh were put upon their mettle; and some feats in reporting and prompt newspaper printing were accomplished which it would be difficult to match in the history of the newspaper press of the country. Whether he is in office or in the cold shades of opposition, Mr Gladstone's speeches never fail to awaken an extraordinary amount of interest in the country. On each occasion he has visited Scotland Mr Gladstone has been reported with an accuracy and fullness which the right honourable gentleman has very heartily acknowledged. In October last the country was on the *qui vive* to hear what the ex-premier had to say on Home Rule and Disestablishment; and the 'special edition' with a verbatim report of the speeches was looked for by the public. How the evening papers reported Mr Gladstone verbatim, set up the types, printed the paper, and had the news-boys in the streets of Edinburgh selling the 'special' before the meeting at which the speech was delivered had separated, will no doubt

interest those who are not initiated in the secrets of a newspaper office.

Mr Gladstone addressed four meetings—two in Edinburgh, in the Corn Exchange and Music Hall; one at West Calder; and one at Dalkeith. The arrangements for reporting these meetings were of an elaborate nature. Every detail was carefully studied beforehand. Nothing was left to chance, and no effort was spared to make the work complete. In the Corn Exchange, the Committee which organised the meeting provided ample accommodation for the army of reporters who were present not only from all parts of Scotland but from England and Ireland.

The corps of the *Dispatch* consisted of nine reporters, a gentleman to keep time, and another to collect the 'copy'—that is, the written-out portions of the speech. The chief reporter, who had made the arrangements, took a check-note. That is to say, he took a note right through the speech, in case any words might accidentally be dropped between the turns of the other reporters. The moment the meeting began the nine reporters commenced their work. Each reporter took a minute turn. That means that he took a short-hand note of the speech for a minute, and then proceeded to write it out in long hand for the printers, his next neighbour meantime taking a note of the speaker also for a minute. This minute turn is quite an innovation in reporting. The turn used to be of five minutes. Three minutes were accounted a very short turn. But with men who can keep their heads, and put themselves unreservedly for the occasion at the disposal of the time-keeper, a minute turn gives fast results. The time-keeper is an important functionary in such a scheme. With watch in hand he passes the turns round, rigidly adhering to a minute in each case. A good reporter can write out a minute turn in about five minutes. At the Corn Exchange meeting each reporter had thus three or four minutes to breathe and to read over his copy before his turn came round again. The 'takes,' numbered with the letters of the alphabet, 'A, B, C,' &c., as they were finished were handed to the person appointed to collect the copy, who noted the turn on a slip before him, put the manuscript into a numbered envelope, and handed it to a messenger whose duty it was to take it to the side-door of the Exchange. From this door to the *Dispatch* office in Cockburn Street, one-third of a mile distant, there was a chain of messengers, each with a 'beat' of about one hundred yards to cover. The lad 'No. 2,' who received it at the door ran with it to 'No. 3,' who passed it on to 'No. 4,' and so it went from hand to hand until it reached the printing office. Immediately the letter was out of his hand, the messenger returned to his original starting-point to await the next batch of copy. This plan answered admirably; the reporters in the hall worked with precision, and the messengers outside loyally seconded their efforts.

In the printing office there was in attendance a large staff of compositors, who dealt with the copy as it was handed in; and so the work of reporting, transcribing, transmitting copy to the office, and setting up the types went on while the speaker was electrifying the great audience with

his oratory. As Mr Gladstone neared the close of his speech, which lasted an hour and twenty-five minutes, the time-keeper, according to instructions, began to reduce the turns in such a way that the reporter who took the last of the address had only a few sentences to write; and it is nothing more than bare fact to say that the cheering which greeted the close of the oration had hardly subsided when the messenger with the end of the completed report was hurrying out at the door. It was in the office five minutes later; and such is the power of organisation well directed, that in ten minutes more the compositors had done their work, and the types were ready to be stereotyped.

The delay that at present takes place in stereotyping is heart-breaking to the manager pushing forward a 'special edition.' It is one of the things which has yet to be overcome. As many people know, an impression is taken off the types by pressing upon them, in a hot press, a layer of what may be popularly described as *papier-mâché*. About a quarter of an hour is required for the setting or stiffening of this matrix from which the metal plate is cast. On this particular evening the whole process was forced through in about twelve minutes. The plate was in the machine-room a minute or so afterwards; and the machines were running within half an hour of the time Mr Gladstone ended his speech. As there were resolutions to be moved after the great orator had sat down, the newboys were able to sell for a halfpenny to the people as they left the Corn Exchange a paper with a verbatim report in it of the speech to which they had been listening. As the speech was over four columns in length, this was a feat of which the paper had every reason to be proud.

For West Calder, which is sixteen miles from Edinburgh, arrangements of a different nature had to be made. The Post-office authorities having refused to provide telegraphic facilities for transmitting Mr Gladstone's speech to Edinburgh, an arrangement had to be made with the Caledonian Railway Company to convey the reporters to Edinburgh by a special train immediately after the meeting. The hour of the meeting was 3.30 P.M., and, judging from his Corn Exchange speech, it was guessed that Mr Gladstone would speak at West Calder for an hour and twenty-five minutes. The time for the departure of the 'special' was therefore fixed for five o'clock. As a matter of fact, the ex-premier sat down at 4.53, so that little time was lost. The speech was all written up in the meeting save the last two turns, and these were finished in the railway carriage. Advantage was also taken of the short time—twenty minutes spent in the journey—to prepare the copy for the compositors. When the special train drew up at the West Princes Street station, one of the party jumped into a hansom and took the whole of the copy to the office. There a largely augmented staff of compositors was in waiting. The speech, also over four columns in length, was set up in an incredibly short space of time; and at 6.30 P.M.—an hour and a half after Mr Gladstone had finished his speech at a place sixteen miles off—the paper, with a verbatim report of the speech, was selling on the streets.

For the Dalkeith meeting, which took place

on a Saturday, quite a novel method of transmitting the copy to Edinburgh was organised. This was by means of a special corps of bicyclists, who willingly gave their services for the occasion, and though the afternoon was wet and the roads bad, entered very heartily into the whole matter. This is perhaps the first time bicyclists have so systematically performed such work. A bicyclist was despatched from Dalkeith every ten minutes, and the five or six miles between that burgh and the capital were covered in splendid time. These arrangements, carefully planned in all their details, worked in the smoothest possible way, so that in about an hour and forty minutes after the Dalkeith meeting was over, a long verbatim report of Mr Gladstone's speech was in circulation in Edinburgh.

Many people look upon a newspaper office as a very mysterious place. How the work is done they never inquire. This article may help them to an understanding of the problem, and at the same time give the public an idea what newspaper people have to strive after in order to place before their readers the latest and fullest news of the day and night.

#### A NOVA-SCOTIA SUGAR-CAMP.

THERE is a sugary, sap-like odour in the air. The gentle spring breeze fans it through the maple trees, up the winding path to the old homestead. The crackling of wood-fires, a bubbling of some boiling liquid, a sound of chopping—all these are the burden of the same breeze. Many voices ring out—a snatch, perhaps, of a French ballad, or a lusty young voice trollying out 'The Maple-leaf for Ever.' The homestead is deserted, and we follow after the truant family. We find them at last in the maple grove; and a gay party they and their neighbours, who have come to assist at the sugar-making, are. They are not idle, for all realise that no time is to be lost, for the work must be got through in the coming six weeks of March and April, ere the sun shines too warmly.

The tall rock-maples, Spartan-like, hold their heads haughtily erect, as if to conceal their injuries, for the blood of these forest beauties is being slowly drained away. A triangular notch is made in each trunk, and in this a chip is placed so as to form a spout; or a hole is bored and a wooden 'leader' inserted. A bucket below catches the reluctant drops; but if the preceding night has been cold and the day mild, a goodly outpouring may be expected.

Next comes the straining process, and then one realises why the Canadians have so decided a preference for 'white sugar' (the adjective applies not, as would be supposed, to the sugar, but to the complexion of its maker), or sugar not made by Indians. In an Indian camp, cleanliness is not consulted, a blanket that has been in use for a season or so being considered an excellent strainer. Here order prevails, and proper woollen cloths are at hand.

Bonfires are gradually melting away the snow, for 'Winter still lingers in the lap of Spring.' The heat draws tears from the crystal icicles yet on the bare branches of the trees. Over the fires swing great iron pots, in which the sap is being 'boiled down' till the proper consistency

is attained. The time of boiling varies with the quality of the sap, and is at best a painstaking process, for the heat is intense, and the 'woody' odour arising with the vapour is overpowering. Maple honey is the first manufacture. As soon as the sap ceases to be watery, the bottles are filled with this Canadian delicacy, and the remaining liquid is watched patiently; careful stirring is needed here, for a pot of scorched syrup is a heavy loss.

The sap rises above the mouth of the pot in great golden-brown bubbles, and then falls again under the hand of the patient stirrer. Children congregate around these centres of sweetness. It is necessary near the end to try the syrup every few minutes by dropping a little on a ball of snow, when, if done, it speedily hardens; and many are the applicants for this post of honour and emolument.

A number of rude baskets and small canoes of brick bark are at hand. After the thickened sap has been chilled, it is packed in these, ready for the market, where it will be known as 'maple wax' or maple candy. The maple sugar is yet in a solvent state, and keeping the great spoon in constant motion through the heavy liquid mass is no light work. At last the molasses becomes 'sandy' or 'grains.' The great work is accomplished—the sugar is made. Moulds, which the young people have been greasing, are now forthcoming. They are of many designs—cubes, hearts, bricks, houses. These are filled and set away to harden. Their appearance in the shop windows will gladden the hearts of the young and old sweet-toothed generation. A considerable quantity is reserved for home use, for the farmer prefers it to ordinary sugar for sweetening tea, coffee, or apple sauce; and happy is that man who partakes of the genuine Nova-Scotia buckwheat cake spread with translucent maple-honey.

#### A TWILIGHT SONG.

The thrush has piped his last clear note  
To herald twilight's hour,  
And fragrant breezes gently float  
Around your silent bower.  
Now drops the dusky robe of Night,  
And, clasping it above,  
One jewelled star shines clear and bright—  
It is the Star of Love!  
Yet cold and cheerless seems its ray,  
Sweetheart! while you are far away.

The fountain, like a fairy lute,  
In tinkling cadence falls;  
And through the wood, with fitful hoot,  
His mate the owl calls.  
The crescent moon behind the hill  
Creeps up, with silvery light;  
Yet round your bower I linger still,  
While evening grows to night,  
And count each weary hour a day,  
Sweetheart! while you are far away.

JAMES WALTER BROWN.

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